



October 2005

## **Executive Summary**

### **State and Regional Needs Assessment**

#### **Introduction**

In 2004, the Washington legislature and governor enacted legislation (House Bill 3103) to revise and update the roles and responsibilities of the Higher Education Coordinating Board (HECB). The legislation marked the first substantive revision of HECB statutes since the board was created in the mid-1980s. Among other changes, HB 3103 directed the HECB to undertake a new responsibility to “develop a comprehensive and ongoing process to analyze the need for additional degrees and programs, additional off-campus centers and locations for degree programs, and consolidation or elimination of programs by the (public) four-year institutions.”

In response to this charge, and consistent with the board’s *2004 Strategic Master Plan for Higher Education*, the statewide and regional needs assessment provides a planning tool that, in conjunction with analysis of institutional roles and missions, will guide academic program and facility planning and approval.

The needs assessment will allow for data-driven decisions related to the allocation of student enrollments by providing a comprehensive assessment of regional higher education needs to meet student, employer, and community demand.

The needs assessment will be updated every other year to examine:

- (1) Projections of student, employer, and community demand for higher education and academic degrees, including liberal arts degrees, on a regional and statewide basis;
- (2) Current and projected degree programs and enrollment at public and private institutions of higher education, by location and mode of service delivery; and
- (3) Data from the Workforce Training and Education Coordinating Board (WTECB) and the State Board for Community and Technical Colleges (SBCTC) on the supply and demand for workforce education and certificates and associate degrees.

## **Description of Work by the HECB and Other Agencies**

The needs assessment draws on a variety of reports and data sources produced by several agencies and represents the first comprehensive analysis that draws these resources together on a statewide basis for program and facility planning.

The assessment relies on work by the Higher Education Coordinating Board, the State Board for Community and Technical Colleges, the Workforce Training and Education Coordinating Board, and the Office of Financial Management (OFM). In addition, key projections and support also come from the Employment Security Department (ESD) and the Department of Community, Trade and Economic Development (CTED). The approach used in the needs assessment was developed with input from representatives of these agencies and representatives from the four-year public universities and colleges and the private (“independent”) colleges of Washington. Finally, included within the report are data on the supply of workers required to meet employer demand developed in collaboration with the SBCTC and WTECB, as directed by HB 3103.

## **Background: Trends and Outcomes in Higher Education**

Washington is a leader in innovation and technology-based industries, but that leadership position has been earned in large part through the recruitment of highly trained employees from outside the state, especially in fields of computer science, engineering, and health care. This trend is illustrated by the fact that the state ranks 10<sup>th</sup> in the nation in the percentage of adults who hold bachelor’s degrees, while it ranks just 33<sup>rd</sup> among the states in the production of degrees at that level by state colleges.

The higher education system in Washington faces dual pressures to (1) increase enrollments in response to projected population growth and (2) increase participation so that more Washington residents have the opportunity to earn college degrees (and the benefits that derive from them) within the state.

## **Scope of Analysis**

The needs assessment responds to a number of questions that will inform the growth and development of the higher education system in the state. Key among these is an estimate of the total size of the higher education system needed to respond to projected student demand, the number of graduates required to meet employer demand, and the broader community demand for higher education.

The assessment responds to these questions by examining the current and planned capacity of colleges and universities in Washington, the number of degrees awarded annually, and projections of student enrollments and occupational openings in the future. Community needs are identified through a variety of approaches, including interviews with community

representatives and data gleaned from a variety of reports from other agencies and groups, including local workforce development plans and reports in specialized areas such as health care and teaching.

## **Statewide Results**

The statewide analysis of higher education needs indicates substantial growth in the state's higher education system will be required to keep pace with student demand. The analysis highlights several areas of special concern due to growth and/or declining numbers of graduates. Here are several statewide highlights:

- The number of graduate and professional degrees awarded over the past three years has increased overall, but the number of degrees awarded in math, physical science, health, and engineering has declined.
- Employment projections indicate approximately 123,000 job openings annually between 2007 and 2012. Of these, 25 percent would require an associate degree (or other mid-level training) and 19 percent would require a bachelor's degree or higher as the entry level requirement. When additional training needs are considered, 25 percent would require a baccalaureate or higher and an additional six percent would require an associate degree or other mid-level training.
- Student demand for education is increasing due to population growth and the determination of more students to seek a bachelor's degree. To meet demand based solely on population growth, the public higher education system would need to add approximately 21,000 full-time equivalent students by 2010 beyond 2004 enrollment levels. In order to continue to increase the number of degrees produced at a rate consistent with the growth over the past 14 years, the system would need to add approximately 45,000 public FTE students over 2004 enrollment levels. Private enrollments, which make up about one-third of baccalaureate and graduate enrollments, would need to continue to grow, adding 8,200 private FTE students between 2004 and 2010.
- Data used in the community demand measures indicate that all fields are becoming more complex and require workers prepared with higher levels of education than in the past. As a result, workers would ideally develop a mix of technical skills and management, communication, and team work skills.

## **Regional Results**

The regional analyses divide the state into the 12 regional workforce development areas (WDAs, see Appendix C) with an additional area of special analysis that includes Snohomish, Island, and

Skagit Counties (SIS). The regional profiles include regional measures of student, community, and workforce needs for higher education.

- Students from each region of the state attend colleges and universities throughout the state, although most attend college relatively close to home.
- The regional analysis demonstrates a need for growth in higher education throughout the state, but there are important differences among the regions and gaps between local and statewide college participation rates.
- Regions facing the greatest enrollment pressure due to population growth include Southwest Washington and King, Snohomish, Island, and Skagit Counties.
- Regions facing the greatest disparity with the state average college participation rate include the Northwest region, Tri-County region, Eastern region, and the Southwest Washington region.

## **Recommendations and Analysis**

- (1) By 2010, the public colleges and universities must grow to accommodate an additional 45,000 FTE students to meet demand resulting from population pressure and increased demand for degrees. In addition, the HECB in collaboration with local colleges must assess and, as necessary, develop policies and plans to increase participation among students in selected regions of the state.
- (2) The higher education system must increase the number of graduates with the skills required to meet the employer needs in a number of key occupational areas. Institutions should develop strategies to increase the numbers of students prepared to fill positions in the high-demand areas of computer science, engineering, software engineering and architecture, and health care occupations. In addition, institutions in the state need to increase the numbers of students enrolled in graduate and professional programs to meet employer needs.
- (3) Expansion of existing strategies in health care and the development of new programs and/or delivery mechanisms is recommended to meet employer and student demand. The health care industry faces critical shortages of qualified workers in a number of occupational areas. The largest number of openings are in nursing, but shortages are apparent in a wide range of fields.
- (4) The state higher education system must develop strategies to increase the number of qualified K-12 teachers and administrators in key shortage areas. The Office of the Superintendent of Public Instruction indicates considerable shortage in special education and some shortage in a range of specialties including, but not limited to, math, science,

and English as a second language. Some shortage is also indicated for most administrative and support specialties.

- (5) Additional study is recommended to better understand the apparent mismatch between supply and demand for trained workers in key occupational areas. In order for the needs assessment to be an effective planning tool for higher education, it is critical that the relationship between training and hiring practices in these occupations is well understood.
- (6) Further analysis of college participation in several regions is necessary to determine whether increased enrollments in regional institutions and/or the development of strategies improve participation are called for.
- (7) A number of improvements to the methodology and data elements used in the needs assessment are recommended to ensure that the needs assessment is an effective tool to guide the growth of the higher education system in the state.